

S/N 10/674,960

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Robert Starkston et al.

Examiner: Samuel Heinrich

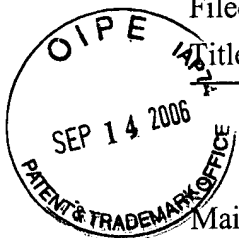
Serial No.: 10/674,960

Group Art Unit: 1725

Filed: September 30, 2003

Docket: 884.949US1

Title: METHODS FOR LASER SCRIBING WAFERS



PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop AF  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

The applicant requests review of the final rejection in the above-identified application.  
No amendments are being filed with this request.

This request is being filed with a Notice of Appeal.

The review is requested for the reason(s) stated below:

Applicant believes there is a clear deficiency in the prima facie case in support of the rejections.

Rejection of Claims 29-31

In the final office action (dated 5/10/2006), the Examiner included rejections under 35 USC §102 (a & b) of most of the claims. The Examiner did not place these rejections in a separate heading in the final office action.

Claims 29-31 were rejected under 35 USC §102 (a & b) as being anticipated by any one of three references [JP 411284278 A (Toshiba Corp) or the Manor (U.S. 6,420,245) or the Peng et al. (U.S. 6,737,606)]. In essence, the Examiner fails to make out a prima facie case with respect to any of these references since each reference fails to disclose, in a single prior art reference, each element of the claim under consideration, much less, the presence in a single prior reference of each and every element of the claimed invention, arranged as in the claim. None of the references [JP 411284278 A (Toshiba Corp) or the Manor (U.S. 6,420,245) or the Peng et al. (U.S. 6,737,606)] mentions an instruction set. In addition to not mentioning an instruction set, none of the references cited [JP 411284278 A (Toshiba Corp) or the Manor (U.S. 6,420,245) or the Peng et al. (U.S. 6,737,606)] teach an instruction set that specifically causes the laser to scribe a first continuous line on a wafer and laser scribe an area near the first continuous

line, as recited in Claim 29. Other specific elements are also missing from some of these references. For example, Manor does not disclose a microprocessor. As a result, Appellant submits that a proper *prima facie* case of anticipation was not made with respect to claim 29 and claims that depend therefrom.

Claims 29-31 were also rejected, in the alternative, under 35 U.S.C. 103(a) as obvious over any of JP 411284278 A (Toshiba Corp) or Manor (U.S. 6,420,245) or Peng et al. (U.S. 6,737,606). None of the JP 411284278 A (Toshiba Corp) or the Manor (U.S. 6,420,245) or the Peng et al. (U.S. 6,737,606) references, standing alone, can be said to make a proper *prima facie* case of obviousness with respect to claims 29-31 since each fails to teach or suggest all the claim limitations. None of the references teach or suggest an instruction set, or an instruction set that specifically causes the laser to scribe a first continuous line on a wafer and laser scribe an area near the first continuous line, as recited in Claim 29. The references seem to teach laser scribing a single scribe line (not necessarily continuous) and then cutting along the scribe line formed. There is no teaching or suggestion of laser scribing anything near the first laser scribed line. There is also no reason within the references or in the knowledge generally available to one of ordinary skill in the art, to modify the reference teachings to yield appellant's invention.

In addition, the Examiner is also making three rejections based on a single reference. Appellant respectfully traverses the single reference rejection under 35 U.S.C. § 103(a) since not all of the recited elements of the claims are found in the any one reference. Since all the elements of the claim are not found in any one reference, Appellant previously requested that the Examiner cite a reference that includes laser scribing a first continuous line, and laser scribing an area near the first continuous line. The Examiner did not cite an additional reference nor did the Examiner place an affidavit of personal knowledge in the file for any elements the Examiner has failed to produce in any of the references (either JP 411284278 A, or Manor, or Peng et al.) clearly showing an element or elements. Accordingly, the rejection under 35 U.S.C. § 103(a) is overcome with respect to claims 29-31.

#### Rejection of Claims 16-21, 23-27, and 32-38

The Examiner rejected claims 16-21, 23-27, and 32-38 as being anticipated by P355046579A (Toshiba Corp) or JP353002074A (NEC Home Electronics LTD) or Boyle et al.

(U.S. 6,586,707). With respect to claims 16 and 23, none of the references [P355046579A (Toshiba Corp) or JP353002074A (NEC Home Electronics LTD) or Boyle et al. (U.S. 6,586,707)] taught laser scribing a first continuous line and a second continuous line, and laser scribing a third continuous line between the first and second line. More specifically, none of the references taught laser scribing a third continuous line between the first and second line, as recited in the claim. The P355046579A (Toshiba Corp) and JP353002074A (NEC Home Electronics LTD) discussed laser scribing but not the laser scribing of the third continuous line between the first and second lines. The Boyle et al. reference did not mention scribing. Accordingly, the Examiner failed to make out a proper prima facie case of anticipation with respect to independent claims 16 and 23, since each and every element as set forth in the claim is not found, nor expressly or inherently described, in a single prior art reference. The same is true for the claims which depend from claim 16, namely claims 17-21, and for the claims which depend from claim 23, namely claims 24-27.

With respect to claim 32, none of the references [P355046579A (Toshiba Corp) or JP353002074A (NEC Home Electronics LTD) or Boyle et al. (U.S. 6,586,707)] taught laser treating a first area of the wafer, laser treating a second area adjacent the first area, and laser scribing a third continuous line, the third continuous line positioned between the first area and the second area. There is definitely no teaching of laser scribing a third continuous line, the third continuous line positioned between the first area and the second area. Accordingly, the Examiner failed to make out a proper prima facie case of anticipation with respect to independent claim 32, since each and every element as set forth in the claim is not found, nor expressly or inherently described, in a single prior art reference. The same is true for the claims which depend from claim 32, namely claims 33-38.

The Examiner then rejects the same set of claims, namely claims 16-21, 23-27, and 32-38, in the alternative, under 35 U.S.C. 103(a) as obvious over P355046579A (Toshiba Corp) in view of JP353002074A (NEC Home Electronics LTD) and in view of Boyle et al. (U.S. 6,586,707). Appellant submits that this alternative rejection under 35 U.S.C. 103(a) is an admission that each of the references falls short of the claimed invention and is therefore not anticipated by any of these references. In other words, the alternative rejection seems to indicate that the rejection under 35 U.S.C. 102(a) falls short of reciting all elements in one reference.

Now going on to the rejections under 35 U.S.C. 103(a), the combination of the references simply falls short of the appellant's inventions as claimed in claims 16 and 23. As noted above, none of the references teaches scribing three lines as recited in the claim. There also appears to be no suggestion of this recitation. None of the references teaches scribing the lines in the claimed manner. Therefore, since none of the references teaches or suggests scribing three lines or describes scribing the lines in the same way, the combination of the prior art references fails to teach or suggest all the claim limitations. As a result, the Examiner's rejection of claims 16 and 23 under 35 USC §103(a) as obvious over P355046579A (Toshiba Corp) in view of JP353002074A (NEC Home Electronics LTD) and in view of Boyle et al. (U.S. 6,586,707) is overcome. In addition, the claims that depend from claim 16, namely claims 17-21, and the claims which depend from claim 23, namely claims 24-27, now also overcome the Examiner's rejection of claims 16 and 23 under 35 USC §103(a) as obvious over P355046579A (Toshiba Corp) in view of JP353002074A (NEC Home Electronics LTD) and in view of Boyle et al. (U.S. 6,586,707) since they include the same recitation as the independent claim from which they depend.

Claim 32 recites "...laser treating a first area of the wafer; laser treating a second area adjacent the first area; and laser scribing a third continuous line, the third continuous line positioned between the first area and the second area." The JP355046579A (Toshiba Corp) reference teaches only forming one scribe line. There is no teaching of laser treating a first area or laser treating a second area. The JP353002074A (NEC Home Electronics LTD) teaches two scribing lines over the same area. There is no laser treating a first area and a second area. The Boyle et al. (U.S. 6,586,707) reference does not teach scribing or laser scribing. The Boyle et al. reference teaches laser machining. One of ordinary skill in the art would not combine either or both of the JP355046579A (Toshiba Corp) reference and the JP353002074A (NEC Home Electronics LTD) since the laser machining of Boyle would obliterate any laser scribing. Therefore, the combination would have no reasonable expectation of success. As a result, claim 32 is not obvious in view of the combination of JP355046579A (Toshiba Corp) in view of JP353002074A (NEC Home Electronics LTD) and in view of Boyle et al. (U.S. 6,586,707). Claims 33-38 also would not be obvious in view of the combination of JP355046579A (Toshiba Corp) in view of JP353002074A (NEC Home Electronics LTD) and in view of Boyle et al. (U.S.

6,586,707) since these claims include the recitations of claim 32 by their dependency.

### CONCLUSION

The applicant respectfully submits that all of the pending claims are in condition for allowance, and such action is earnestly solicited. The Examiner is invited to telephone the below-signed attorney at (612) 373-6977 to discuss any questions which may remain with respect to the present application.


If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

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By their Representatives,

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Date 9/11/06 By   
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**CERTIFICATE UNDER 37 CFR 1.8:** The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 11th day of September 2006.

Name Amy Moriarty

Signature 